

CLAIMS

What is claimed is:

1. A mobile satellite telecommunications system, comprising:

at least one user terminal;

at least one satellite in earth orbit; and

at least one gateway bidirectionally coupled to a data communications network;

said at least one gateway comprising a controller for initiating a Domain Name Service (DNS) query in response to a Uniform Resource Locator (URL) received in a message from a one user terminal via said at least one satellite.

2. A mobile satellite telecommunications system as in claim 1, and further comprising a DNS server that is co-located with said gateway.

3. A mobile satellite telecommunications system as in claim 1, wherein said controller receives an Internet Protocol (IP) address in response to said DNS query, and wherein said controller replaces said URL with said IP address and forwards said message to a destination server identified by said IP address.

4. A mobile satellite telecommunications system as in claim 1, wherein said at least one satellite is in a non-geosynchronous orbit.

5. A mobile satellite telecommunications system as in claim 1, wherein said at least one satellite comprises an on-board processor (OBP) that is responsive to said URL for selecting a gateway and for routing said message to said selected gateway.

6. A mobile satellite telecommunications system as in claim 5, wherein said satellite comprises at least one Inter-Satellite Link (ISL) transceiver for routing said message through at least one further satellite.
7. A mobile satellite telecommunications system as in claim 5, wherein said OBP is responsive to a portion of said URL that identifies a geographical region where a destination server identified by said URL is located, and operates to initiate a routing of said message to a gateway that serves said identified geographical region.
8. A mobile satellite telecommunications system as in claim 5, wherein said OBP is responsive to a portion of said URL that identifies a country where a destination server identified by said URL is located, and operates to initiate a routing of said message to a gateway that serves said identified country.
9. A method of operating a satellite telecommunications system, comprising:
 - transmitting a message from a user terminal, said message comprising a Uniform Resource Locator (URL);
 - receiving said message with a satellite and forwarding said message to a gateway that is bidirectionally coupled to a data communications network;
 - at the gateway, performing a Domain Name Service (DNS) query in response to the URL received in the message to obtain a network address of a server identified by the URL; and
 - sending the message from the gateway to a destination server having the network address.

10. A method as in claim 9, wherein said gateway receives an Internet Protocol (IP) address in response to said DNS query, and replaces said URL with said IP address before transmitting said message to said data communications network.

11. A method as in claim 9, wherein said at least one satellite is in a non-geosynchronous orbit.

12. A method as in claim 9, wherein said satellite is responsive to said URL for selecting a gateway and for routing said message to said selected gateway.

13. A method as in claim 12, wherein said message is routed through at least one Inter-Satellite Link (ISL) to at least one further satellite.

14. A method as in claim 12, wherein said gateway is selected in response to a portion of said URL that identifies a geographical region where a destination server identified by said URL is located, and wherein said message is routed to a gateway that serves said identified geographical region.

15. A method as in claim 12, wherein said gateway is selected in response to a portion of said URL that identifies a country where a destination server identified by said URL is located, and wherein said message is routed to a gateway that serves said identified country.

16. A method of operating a satellite telecommunications system, comprising:

transmitting a message from a user terminal, said message comprising a Uniform Resource Locator (URL);

receiving said message with a satellite, selecting a gateway to receive said message based on said URL, and forwarding said message to said selected gateway;

at the selected gateway, performing a Domain Name Service (DNS) query in response to the URL received in said message to obtain an Internet protocol (IP) address of a destination server identified by the URL; and

replacing the URL with said IP address and sending said message from said gateway to said destination server having said IP address.

17. A method as in claim 16, wherein said gateway is selected in response to a portion of said URL that identifies a country where said destination server identified by said URL is located, and wherein said message is forwarded to said gateway that serves said identified country.

18. A method as in claim 16, wherein said satellite routes said message to said selected gateway through at least one Inter-Satellite Link (ISL) to at least one further satellite.